

Chapter Test B

For use after Chapter 1

Describe a pattern in the numbers. Write the next two numbers you expect in the pattern.

1. 5, 7, 9, . . .

2. 1, 4, 9, 16, 25

3. Sketch the next figure in the pattern.



Show the conjecture is false by finding a counterexample.

4. **Conjecture:** If a triangle has two angles whose measures are equal, then the measure of the third angle must be equal to the other two.

Counterexample: _____

5. **Conjecture:** If any five consecutive whole numbers are chosen, then three of the numbers will be even numbers.

Counterexample: _____

Answers

1. _____

2. _____

3. See left.

4. See left.

5. See left.

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

Complete the conjecture based on the pattern you observe.

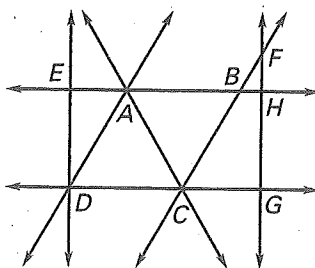
6. The difference of consecutive even integers is either ? or ?.

$$8 - 6 = 2 \quad 10 - 8 = 2 \quad -4 - (-6) = 2 \quad -12 - (-14) = 2$$

$$6 - 8 = -2 \quad 8 - 10 = -2 \quad -6 - (-4) = -2 \quad -14 - (-12) = -2$$

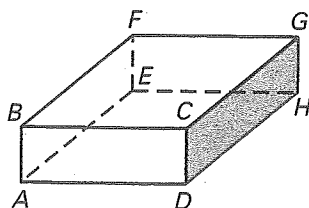
Name a point that is collinear with the given points.

7. F and B
8. G and C
9. G and H



Name a point that is coplanar with the given points.

10. A, B, and C
11. F, G, and E
12. C, H, and E



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13. What type of geometric figure is formed by the intersection of two lines?
14. What type of geometric figure is formed by the intersection of two planes?
15. Sketch a line that intersects two planes.

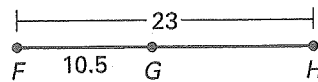
Answers

13. _____
14. _____
15. See left.
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____

Use the diagram at the right.

16. Find GH .

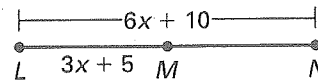
17. Is $\overline{FG} \cong \overline{GH}$?



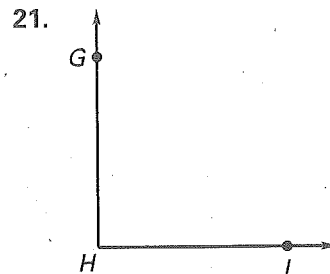
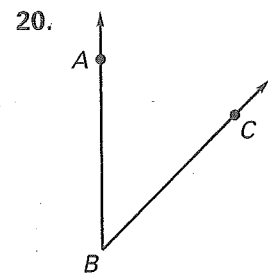
Write a variable expression for the length.

18. Write an expression for AC .

19. Write an expression for MN .



State whether the angle appears to be *acute*, *right*, *obtuse*, or *straight*. Then estimate its measure.



Find the measure of the angle.

22. $m\angle ABD$

23. $m\angle CBD$

24. $m\angle ABE$

